## **CLAIMS**

1. A dihalide represented by the following formula: [Formula 1]

$$R^3$$
 $R^3$ 
 $R^3$ 
 $R^3$ 
 $R^3$ 

- 5 (wherein R<sup>1</sup> and R<sup>1'</sup> represent a halogen, R<sup>2</sup> and R<sup>2'</sup> represent an alkyl group or a silyl group having a substituent, and R<sup>3</sup> and R<sup>3'</sup> represent a hydrogen or an alkyl group).
- A dihalide according to claim 1, wherein the silyl group having the substituent is at least one selected from the group consisting of Si(CH<sub>3</sub>)<sub>3</sub>, Si(n-C<sub>4</sub>H<sub>9</sub>)<sub>3</sub>, Si(t-C<sub>4</sub>H<sub>9</sub>)<sub>3</sub>, Si(CH<sub>3</sub>)<sub>2</sub>(C<sub>6</sub>H<sub>5</sub>) and Si(CH<sub>3</sub>)<sub>2</sub>(n-C<sub>18</sub>H<sub>37</sub>).
  - 3. A dihalide according to claim 1 or 2, wherein the alkyl group is an alkyl group having a carbon number of 1-20.
- 4. A polymer compound having a structure represented by the following formula in its main chain:

[Formula 2]

(wherein  $R^2$  and  $R^{2'}$  represent an alkyl group or a silyl group having a substituent, and  $R^3$  and  $R^{3'}$  represent a hydrogen or an alkyl group).

5. A polymer compound according to claim 4, which is represented by the following formula:

[Formula 3]

$$\begin{array}{c|c}
0R^2 & 0R^2 \\
\hline
R^3 & R^3
\end{array}$$

(wherein R<sup>2</sup> and R<sup>2</sup> represent an alkyl group or a silyl group having a substituent, R<sup>3</sup> and R<sup>3</sup> represent a hydrogen or an alkyl group, and n represents a polymerization degree and is 5-1000).

- 6. A polymer compound according to claim 4, which is a copolymer comprising the structure represented by the formula claimed in claim 4 and another structure.
- 7. A polymer compound according to claim 5, wherein the copolymer is at least one selected from the group consisting of the following formulae:

[Formula 4]

$$\left( \begin{array}{c} R^{5} R^{5} \\ R^{4} O O R^{4} \end{array} \right)$$

(wherein R<sup>4</sup>, R<sup>4</sup>, R<sup>5</sup> and R<sup>5</sup> represent an alkyl group),

[Formula 5]

(wherein  $R^6$  and  $R^{6'}$  represent a silyl group having a substituent, and  $R^7$  and  $R^{7'}$  represent an alkyl group),

15

5

[Formula 6]

(wherein R<sup>6</sup> and R<sup>6</sup> represent a silyl group having a substituent),
[Formula 7]

$$\left( \begin{array}{c} R^7 & R^{7'} \\ R^6 & 0 \end{array} \right)$$

5

(wherein  $R^6$  and  $R^{6'}$  represent a silyl group having a substituent, and  $R^7$  and  $R^{7'}$  represent an alkyl group), and

[Formula 8]

10

20

(wherein R<sup>7</sup>, R<sup>7</sup>, R<sup>8</sup>, R<sup>8</sup>, R<sup>9</sup> and R<sup>9</sup> represent an alkyl group).

- 8. A polymer compound according to any one of claims 4-7, wherein the alkyl group is an alkyl group having a carbon number of 1-20.
- 9. A method for producing a polymer compound, in which a polymer compound as claimed in any one of claims 4-8 is obtained by dehalogenation-polymerizing a dihalide as claimed in claim 1 or 2.
  - 10. A method for producing a polymer compound according to claim 8, wherein the dehalogenation-polymerization is performed in the presence of a palladium or nickel compound.
    - 11. A thin film obtained by using a polymer compound as

claimed in any one of claims 4-8.